

STUDIES IN THE EUPATORIEAE (ASTERACEAE). LXVI.

THE GENUS, PACHYTHAMNUS.

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Careful reconsideration causes us to raise the rank of a subgenus which we described some years ago (King & Robinson, 1970) under the genus Ageratina. The single species involved is one of the most specialized toward xeric habitats of any in the Eupatorieae. The thickened stems and the seasonally leafless condition are reminiscent of other Mexican plants such as Cnidocolus and Senecio praecox A.P. Decandolle.

The striking differences in habit are reinforced by two anatomical features of the flower. The corolla lobe is more papillose on the outer surface than other species that we have treated in Ageratina. This characteristic is of considerable significance when the consistently thickened and smooth outer surfaces of the lobes of other Ageratins are considered. The second distinction is the lack of enlargement at the base of the style. Almost all other species in Ageratina and the closely related genera have a distinct enlargement just above the nectary. Sometimes this consists of simply a ring of enlarged cells but in some cases a very large node is present. There is a small group of species without an enlarged base on the style that we retain in the genus Ageratina. This last group consists of A. pentlandiana and its relatives in Peru, and these show none of the other specialized features of the Mexican species that we are placing here in a separate genus.

The genus Pachythamnus is closely related to Ageratina and the carpodium is of the type found in Ageratina subgenus Neogreenella. It is the latter subgenus of Ageratina that we feel contains the more primitive elements of that genus and there is no reason to suggest that Pachythamnus has to be of particular recent origin.

Pachythamnus (R.M. King & H. Robinson) R.M. King & H. Robinson, new status. Ageratina subgenus Pachythamnus R.M. King & H. Robinson, *Phytologia* 19:228. 1970.

Perennial shrubs or small trees. Stems swollen, glabrous, terete when fresh, leafless during dry season, with inflorescence terminal on stems or branches and withering and falling after flowering, new leafy branches by subfloral innovation. Leaves

opposite distinctly long petiolate; laminae broadly ovate to deltoid, margin with a few blunt teeth. Inflorescence rather densely corymbose; heads ca. 15 flowered; involucre of ca. 15 rather narrow usually acute subimbricate mostly subequal phyllaries in 2-3 series; receptacle slightly convex, with minute scattered hairs. Corolla narrowly funnelform; outer surface and margins of lobes smooth below, with projecting cells at the tip, without hairs or glands, without stomates; inner surface of lobes papillose with long projecting cells; cells of backs of lobes and of tube mostly narrow with sinuous walls. Anther collar composed of numerous quadrate cells below, elongate cells above, all with little or no ornate thickening on the walls; exothecial cells in part usually lax and somewhat longer than wide; anther appendage large, pollen spherical, tricolpate, spinose, type II sometimes present. Style base glabrous, without swollen node; surface cells of stylar appendage densely long projecting. Achene prismatic, usually 5-costate, bearing setae; carpopodium distinct but without distinct upper limit, rounded, with rather lax quadrate cells having thin beaded walls; basal vasculature of achene united to upper level of carpopodium; pappus of ca. 25 slender scabrous setae rather easily deciduous, with pointed apical cells.

Type species: Eupatorium crassirameum B.L.Robinson

The genus is monotypic.

Pachythamnus crassirameus (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Eupatorium crassirameum B.L.Robinson, Proc. Am. Acad. 35: 332. 1900. Mexico, C. Amer.

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